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CHRONICLE OF THE WORLD HEALTH ORGANIZATION

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RECENT AND FORTHCOMING MEETINGS

1950

2-9 November	WHO Expert Committee on International Epidemiology and Quarantine, Legal Subcommittee, third session, Geneva
6-7 November	WHO Expert Committee on the Unification of Pharmacopoeias, Subcommittee on Non-Proprietary Names, first session, Geneva
6-11 November	WHO Expert Committee on Biological Standardization, fourth session, Geneva
6-13 November	FAO/WHO Expert Panel on Brucellosis, first session, Washington
27 November-9 December	Commission for Technical Co-operation in Africa, WHO Malaria Conference in Equatorial Africa, Kampala, Uganda
11-12 December	Preparatory Working Group on a Public-Health Administration Seminar, Geneva
11-16 December	WHO Expert Committee on Malaria, fourth session, Kampala, Uganda
11-16 December	WHO Expert Committee on Mental Health, Subcommittee on Alcoholism, first session, Geneva
11-16 December	Joint WHO/FAO Expert Group on Zoonoses, first session, Geneva

1951

8-30 January	WHO Executive Board : Standing Committee on Administration and Finance, Geneva
22 January-5 February	WHO Executive Board, seventh session, Geneva
30 January	Léon Bernard Foundation Committee, Geneva
9 April-4 May	WHO Special Committee to consider the Draft International Sanitary Regulations prepared by the Expert Committee on International Epidemiology and Quarantine, Geneva
10-17 April	Joint FAO/WHO Expert Committee on Nutrition, second session, Rome
19-28 April	WHO Expert Committee on the International Pharmacopoeia, eighth session, Geneva
30 April-1 May	WHO Expert Committee on the International Pharmacopoeia, Subcommittee on Non-Proprietary Names, second session
7 May	Fourth World Health Assembly, Geneva
18 May	WHO Regional Committee for the Western Pacific, first session, Geneva
28-29 May	WHO Consultative Committee for Europe, first session, Geneva
1-16 June	WHO Executive Board, eighth session, Geneva

BACKGROUND TO THE INTERNATIONAL SANITARY REGULATIONS

DR. P. DOROLLE

Speech by the Deputy Director-General of WHO at the opening meeting of the Special Committee set up to consider the Draft International Sanitary Regulations, 9 April 1951

... The meeting here today of the special committee which you constitute is undoubtedly a significant event in the history of international sanitary regulations...

A chance which I consider as a happy augury has timed your committee meeting to take place precisely in the centenary anniversary year of the first attempt, on the international level, to establish an agreement for the purpose of limiting the spread of pestilential diseases.

Although your distant predecessors of 1851 in Paris had not the satisfaction of seeing their work brought to a successful conclusion, and although 40 years of continuous effort in numerous conferences were necessary before the establishment in Venice, in 1892, of the first international convention, nevertheless their faith and persistence furnish us at least with an example worthy to be followed : the first step had been made, the idea had taken shape. I will not recall in detail the long history of international sanitary conventions, but we should be lacking in due respect and gratitude if we did not at least mark the milestones along the road : 1894—the first sanitary conference on the Mecca Pilgrimage : 1902—the setting-up in Washington of the Pan American Sanitary Bureau whose fiftieth anniversary we shall be celebrating next year ; 1903—the agreement signed in Paris, the resolutions of which, adopted in the 1907 Rome Agreement, were to lead to the birth, in 1909, of the Office International d'Hygiène Publique. These two institutions, by giving a concrete form to international collaboration, were destined to facilitate later conferences. In 1905, the Pan American Sanitary Convention appeared. In 1912, after a conference held in Paris, a great international convention emerged. In 1924, the Pan American Sanitary Code made its first appearance. In 1926, thanks to the efforts of the Office International d'Hygiène Publique, an international sanitary convention was signed by 66 nations and ratified by 44. 1933 saw the establishment of the International Sanitary Convention for Aerial Navigation, made necessary by the development of this new means of transport. In 1944, under the auspices of UNRRA, another convention amended that of 1926 on maritime traffic and that of 1933 on aerial navigation.

The fact is, however, that, unfortunately, none of these agreements has entirely replaced the previous conventions. Their geographical fields often do not coincide and their objects are not always exactly the same. Above all, since they are diplomatic instruments subject to the formal ratification of signatory States, there are always certain States subscribing to the most recent conventions while others remain as adherents to very old agreements. Thus, at the present time, there are simultaneously in force the conventions of 1903, 1912, 1926, 1933, 1944, the Pan American Convention of 1905, the Pan American Sanitary Code of 1924, apart from the 1934 arrangements with regard to bills of health and consular visas. Moreover, in certain countries the internal regulations for the legal application of international conventions have not kept pace with the conventions themselves. The result, if I may say so, is that the present situation appears to be chaotic or at least inextricably confused to anyone attempting to analyse it. The fact that more serious difficulties have not arisen is due to the intelligence of sanitary authorities, to the good sense shown by those responsible for the application of the regulations, to the general goodwill of all concerned, and to the mediating influence of the international bodies.

Nevertheless, the necessity of making the international sanitary statutes both uniform and rational has become clear to all. Thus, when in July 1946 the Constitution of the World Health Organization was drawn up, it was recognized that one of the essential functions of the Organization would be to " propose conventions, agreements and regulations, and to make recommendations with respect to international health matters ... ". Article 21 of the same Constitution develops this principle by giving to the Health Assembly " authority to adopt regulations concerning sanitary and quarantine requirements and other procedures designed to prevent the international spread of disease ". In giving to the Health Assembly the power to adopt international sanitary regulations, the founders of the Organization obviously desired to institute a new procedure likely not only to lead to the uniformity generally recognized as necessary, but also likely to maintain that measure of flexibility in the new regulations which would make them adaptable to the constantly developing scientific knowledge concerning epidemiology and to the changes in the nature and speed of modern transport. This flexibility could not be obtained with the old diplomatic instruments calling for special meetings of international conferences and subject to the slow and uncertain ratification procedures. It is precisely this defect which Article 22 of the Constitution remedies by providing that the regulations adopted by the Assembly shall enter into force for Member States after simple notification, except for those Member States signifying, within a certain period, either their refusal or their reservations. This happy and somewhat revolutionary formula conferring on the World Health Assembly the power to adopt sanitary regulations on an international level not only makes it possible for the Assembly to adopt

those regulations which it considers most satisfactory and bring them into force by a simple and automatic procedure; but in addition—and this is obvious—it confers on the Assembly the right to modify such regulations in the light of experience gained by a procedure as simple as that for the adoption of the initial regulations themselves.

During the first months of its existence, the World Health Organization Interim Commission established expert committees entrusted with the task of preparing for the revision or rather for the re-framing of the existing sanitary conventions. One of these committees was specially concerned with the important question of the sanitary control of the Mecca Pilgrimage. Others, established jointly with the Office International d'Hygiène Publique —the importance of whose role in this field it is impossible to overemphasize—analysed and evaluated the most recent data on the epidemiology of the main pestilential diseases and on modern methods of disinsectization. On the basis of this technical documentation the Expert Committee on International Epidemiology and Quarantine, viewing the matter from the angle of quarantine practice, formulated a series of principles to serve as a basis for the preparation of the new International Sanitary Regulations. After the approval of these principles by the Second World Health Assembly, the expert committee was given the task, with the assistance of the legal subcommittee, of drawing up the first draft of the regulations. This first draft was submitted for the consideration of governments and of the other interested international organizations. The observations, comments, and suggestions made were studied by the expert committee and its subcommittee during long and patient deliberations during which the draft which we have before us today was established. It is by the desire of the Third World Health Assembly—whose special committee you constitute—that you have been called together today, Gentlemen, to study this text and to give it its final form, so that the Fourth World Health Assembly, next month, may make a decision as to adoption of the regulations.

In contrast to what frequently happens in international meetings, you have only one working document, established in the actual form of the regulations to which it is intended to give birth. As I have said, this is the result of very lengthy preparatory work, the fruit of patient technical investigation and frank opposing of divergent tendencies accompanied always, nevertheless, by a desire to come to a final understanding. This slim document contains the essence of the most authoritative opinions, expressed with full knowledge of the facts, of the most qualified technical and legal experts of the world, revised after critical study on the part of governments and directly interested international bodies which have been, without unnecessary delay but also without dangerous haste, able to examine the first draft in the light of practical knowledge gained from their own experience.

The text submitted for your examination, in which is, of course, embodied a large part of the substance of the older conventions, defines the maximal measures which can be imposed on international traffic in order to ensure sanitary protection at frontiers. In many cases it will not be necessary to apply the provisions made (which go to the limit of what can be imposed) in their entirety or even in part. The ultimate aim is, by the proper organization of national health services, to destroy diseases at their source and establish hygienic conditions in which such diseases cannot develop. We cannot hope to attain this end everywhere without very long and persistent effort : in the meantime, let us concentrate on producing the best possible set of regulations.

I spoke just now of the patient and assiduous efforts which have gone to the drawing-up of the draft regulations, taking into account always the divergency of opinions concerning the measures necessary for preventing the spread of epidemic scourges. The problem before you is, it seems to me, that of the method to be adopted in order to make the best use of this preliminary work and to emerge as rapidly as possible from the seemingly inextricable confusion presented by the present international sanitary conventions. The word "method" reminds me of that rule laid down by the philosopher Descartes three centuries ago in his "Discourse on Method" : "It is a plain truth that when we cannot discern the indisputably true opinion, we must follow the most probably true". Nothing seems to me more applicable to the present case than the image with which the philosopher illustrates this maxim—that of travellers lost in the forest who must turn neither to the one side nor to the other but "walk always as straight as possible in the same direction without deviating for minor considerations" in order to arrive, if not exactly where they wish to be, at least somewhere "where they will be better off than in the middle of the forest". If we wish really to emerge from the forest in which we are today somewhat lost, is not the best way, in fact, to proceed along a path as straight as possible in the direction indicated by those who have devoted themselves to the preparation of the draft ? It may not be in your power to accept as absolutely "indisputable" the opinions on which they have based their work ; but these opinions, nevertheless, retain their full value as being the most "probably true".

Gentlemen, you are now about to commence your work. Whatever the value of the preliminary work which has been achieved for your guidance, your task still remains an arduous one and will call for the exercise of all your powers. I am nevertheless certain that you will find a way to succeed. Bearing in mind that it will be possible to improve the regulations you are about to establish, you will be able, without aiming at an unattainable perfection, to achieve a just and reasonable balance between the technical minimum necessary to avoid the spread of disease, and the administrative maximum which it is possible to impose without unnecessary

hampering of international traffic, which is an essential element in the economic and social life of the world today. In any case, I am certain you are all aware that the regulations established by you will be of value only in so far as they are adequately applied. From this point of view, the past is a guarantee of the future, since in this international field more than in any other each knows that he can generally count on the goodwill of all.

Gentlemen, I declare open the session of the Special Committee established by the Third World Health Assembly to consider the Draft International Sanitary Regulations.

INTERNATIONAL ACTION AGAINST BRUCELLOSIS

"We are now in possession of sufficient knowledge and practical experience [in brucellosis] to undertake satisfactory programmes of diagnosis, control and eradication in the various areas of the world."

This was the view expressed by the Joint FAO/WHO Expert Panel on Brucellosis at its first session in Washington, from 6 to 13 November 1950,[1]

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[1] The following took part in this session :

Dr. W. Braun, Research Bacteriologist, Camp Detrick, Frederick, Md., USA
Dr. H. C. Bendixen, Royal Veterinary College, Copenhagen, Denmark
Dr. B. N. Carle, National Institutes of Health (US Public Health Service), Bethesda, Md., USA
Dr. M. Ruiz Castañeda, Mexico Research Institute, General Hospital, Mexico (*Vice-Chairman*)
Sir Weldon Dalrymple-Champneys, Deputy Chief Medical Officer, Ministry of Health, London, United Kingdom (*Chairman*)
Dr. R. Durusan, Institute of Veterinary Bacteriology, Etlik, Ankara, Turkey
Dr. S. Elberg, University of California, Berkeley, Calif., USA
Dr. Alice C. Evans (formerly US Public Health Service), 1661 Crescent Place, N.W., Washington, D.C., USA
Dr. H. J. Harris, 20 Fifth Avenue, New York City, N.Y., USA
Dr. L. M. Hutchings, Department of Veterinary Medicine, Purdue University, Lafayette, Ind., USA
Professeur M. Janbon, Clinique des Maladies infectieuses, Cliniques Saint-Eloi, Montpellier, France
Dr. I. Live, School of Veterinary Medicine, University of Pennsylvania, Philadelphia, Pa., USA
Dr. N. McCullough, School of Medicine, University of Chicago, Chicago, Ill., USA
Dr. C. Manthei, Animal Disease Station, US Bureau of Animal Industry, Beltsville, Md., USA
Professor G. Mazzetti, Director, Institute of Hygiene for the Study of Brucellosis, University of Florence, Italy
Dr. C. K. Mingle, US Bureau of Animal Industry, Department of Agriculture, Washington, D.C., USA
Dr. B. L. Moran, Chief, Brucellosis and Tuberculosis Division, Ministry of Agriculture and Animal Husbandry, Buenos Aires, Argentine
Dr. L. Olitzki, Hadassah Medical School, Hebrew University, Jerusalem, Israel
Dr. G. Pacheco, Instituto Oswaldo Cruz, Rio de Janeiro, Brazil
Dr. G. Renoux, Professeur de Bactériologie à la Faculté de Médecine de l'Université de Montpellier, France
Dr. M. Roepke, College of Veterinary Medicine, University of Minnesota, St. Paul, Minn., USA
Dr. B. T. Simms, Chief, US Bureau of Animal Industry, Department of Agriculture, Washington, D.C., USA
Dr. W. W. Spink, Department of Medicine, University of Minnesota, Minneapolis, Minn., USA
Dr. A. W. Stableforth, Director, Ministry of Agriculture and Fisheries Veterinary Laboratory, New Haw, Weybridge, Surrey, United Kingdom (*Rapporteur*)
Dr. J. H. Steele, Chief, Veterinary Public Health Division, Communicable Disease Center (US Public Health Service), Atlanta, Ga., USA
Dr. A. Thomsen, Chief, Brucellosis Department, State Veterinary Serum Laboratory, Copenhagen, Denmark

Secretaries :

Dr. M. M. Kaplan, Veterinary Officer, Division of Epidemiological Services, WHO
Dr. K. V. L. Kesteven, Chief, Animal Industry Branch, Agriculture Division, FAO

FIG. 1. JOINT FAO/WHO EXPER PANEL ON BRUCELLOSIS—I

General view of the panel in session

FIG. 2. JOINT FAO/WHO EXPERT PANEL ON BRUCELLOSIS—II

One of the sessions of the Human Medicine Section of the panel

FIG. 3. JOINT FAO/WHO EXPERT PANEL ON BRUCELLOSIS—III

Some of the panel members. Left to right: Dr. M. Roepke, Dr. H. C. Bendixen, Dr. A. Thomsen, Dr. A. W. Stableforth (Rapporteur), and Sir Weldon Dalrymple-Champneys (Chairman)

held to survey the world position as concerns brucellosis and to consider methods of improving it. The report of the panel has now been published as No. 37 in *World Health Organization: Technical Report Series.*

Brucellosis, which affects both livestock and man, has repercussions on general economy as well as on public health. The influence of the disease on public health has two aspects : it involves a loss of working capacity, among agricultural workers in particular, and a reduction of vitally needed foodstuffs, especially animal protein, resulting from morbidity among cattle.

In the USA, where efforts have already been made to limit the losses caused by brucellosis, an annual saving of 50,000,000 dollars in animal production has been realized. In Norway, brucellosis has been eradicated, and the cost of the programme has been less than the annual loss formerly caused by the disease.

Brucellosis in Human Beings

Human brucellosis is generally not transmitted from man to man. Infection is due to contact with animals or to infected animal products. Consequently, control should take place at the stage of animal infection. In certain countries, 60% to 70% of cases appear to result from handling infected matter (foetus, placenta, urine, manure), or from the inhalation of dust or dried and pulverized infected products. Infection takes place through the skin, the mucous membranes, or the eyes.

The heat treatment of infected products, of milk and its derivatives in particular, precautions during the handling of carcasses, personal hygiene, and environmental sanitation are all factors which can reduce human morbidity.

Diagnosis

Reliable diagnosis of the disease can be based only on the culture of the responsible micro-organism which may be found in the blood, bone marrow, lymph-nodes, urine, etc. There are no infallible criteria for the absence of infection.

Among the procedures used for diagnosis, the sero-agglutination test, when carried out with a suitable antigen and satisfactory technique, gives positive results in cases of active infection. The complement-fixation test has no practical value at the present time, but it deserves further investigation. The intradermal test should be interpreted, whatever the antigen used, as revealing an allergic state, without other diagnostic significance. The expert panel recommends that planned investigation should be carried

out with the various antigens used in the different countries so as to determine the value of this test and its possible applications.

In view of the urgent need for more satisfactory criteria of infection, other tests should be studied and funds made available for this purpose. Such tests include Castaneda's spot test, agglutinin-blocking antibodies, the SS factor (selection of " smooth " variants), bactericidins, and protective antibodies in sera.

Therapy

Penicillin is not indicated. Streptomycin, or dihydrostreptomycin' administered with the customary precautions, in combination with a sulfonamide such as sulfadiazine or with other antibiotics (aureomycin and terramycin) has given valuable results. The following dosage schedule was suggested : 1 to 2 g daily of streptomycin or dihydrostreptomycin for 14 to 21 days and simultaneous administration of 2 g of aureomycin or terramycin daily for the same period. It seems that the addition of a sulfonamide (in a dose of 3 g daily for 14 to 21 days) increases the therapeutic effect of the antibiotics mentioned above. The panel recognizes the variability in dosage schedules and anticipates revisions in the foregoing recommendations.

Both aureomycin and terramycin, used alone in a dose of 2 to 4 g daily for 14 to 21 days, have given good results. Chloramphenicol also appears to be of value. However, despite the advances which they have made possible, the antibiotics do not so far represent a final solution to the problem of the treatment of brucellosis, since relapses have been observed. Nevertheless, they should be given first place whenever available, stated the panel. When appropriate antibiotics are not available, vaccine therapy, applied according to well-established methods, may be considered. Research should be carried out in this field and the utility of vaccines studied, particularly in cases where treatment with antibiotics has not resulted in a complete cure.

Brucellosis in Animals

The elimination of infected animals (giving a positive reaction to serological diagnostic tests) and vaccination, which increases the resistance of healthy animals, are the two basic principles in the control and eventual eradication of brucellosis. In addition, however, hygiene and environmental sanitation play an essential part. The disinfection or destruction of matter which may contain brucella organisms (foetus, placenta, excreta, bedding), the isolation of infected animals at parturition, the elimination of those employed for artificial insemination, precautions aimed at preventing the contamination of water-supplies, pastures, and farm premises,

as well as personal hygiene, are all measures of fundamental importance. The success of other control measures, particularly vaccination, depends upon their being carried out. The latter, in fact, should not be considered as a substitute for hygienic precautions. On the contrary, it should be remembered that vaccination cannot have its full effect if the above-mentioned precautions are not observed.

Vaccines

Several attenuated vaccines for use in cattle have been prepared in different countries. Strain 19—which is a " smooth ", avirulent strain of *Brucella abortus*—at present appears to be the best, from the standpoint of safety and ease of production. Living vaccines with high or unknown virulence have been used in the past, but they may spread infection and should not be employed. Dead vaccines in oily excipients have given good results, inferior however to those obtained with strain 19.

The panel examined the facts at present known as regards the use of strain 19 vaccine, its production, stability in the liquid or desiccated state, and its control. It recommended that a central laboratory distribute seed cultures to regional centres which would, in turn, be responsible for distributing subcultures to the laboratories producing vaccines. The latter can obtain information concerning subculturing and the production of vaccine from WHO or FAO.

Control of Bovine Brucellosis

Since no successful treatment of bovine brucellosis is known, all control measures must centre around preventing the infection of herds free from the disease. Conditions in the different countries are so varied that no one technique or method of control can be universally employed. Even in countries where conditions are less favourable, every effort should be made to begin control measures which would lead to the final eradication of brucellosis. To this end, the panel made recommendations inviting the countries to take all suitable measures. In countries where the sanitary laws concerning livestock are inadequate, the following measures should be considered : the enactment of sanitary laws ; the appointment of permanent qualified staff to enforce such laws ; the control of imported cattle, import being confined as far as possible to heifers tested for brucellosis and coming from non-infected herds ; restriction of movement of cattle ; education of the public ; training of veterinarians and technicians. In countries with adequate sanitary laws and specialized personnel, vaccination of healthy animals in infected herds and the elimination of sick cattle should be carried out in accordance with certain principles concerning which the panel made recommendations.

Role of International Agencies

At present twelve centres for the study of brucellosis exist in various parts of the world. The panel recommended that, making use of these centres, investigation and control be intensified and that the regional centres should continue their efforts to standardize techniques, both in the field and in the laboratory. The panel also recognized that the collaboration of WHO, FAO, and the International Office of Epizootics had given successful results, making it possible to supply stock cultures and standard sera to interested workers and to give technical advice to governments.

DISEASES TRANSMITTED TO MAN BY ANIMALS

There are over 80 known diseases which can be transmitted to man by vertebrate animals. One need only cite tuberculosis, brucellosis, rabies, Q fever, and anthrax to give an idea of the importance of some of these diseases. Brucellosis [1] and rabies [2] control have already been studied by groups of experts. Several of the other zoonoses present public-health problems which are of concern to many governments. Requests for technical advice received by WHO and by the United Nations Food and Agricultural Organization (FAO) led to the setting-up of a Joint WHO/FAO Expert Group on Zoonoses, which held its first session in Geneva from 11 to 16 December 1950.[3] The report on this meeting has recently been published as *World Health Organization : Technical Report Series*, No. 40.

Tuberculosis, Q fever, anthrax, psittacosis, and hydatidosis are among the diseases which held the attention of the experts. Other diseases, such as the virus encephalitides, leptospirosis, tularaemia, trichinosis, etc., are to be considered later.

During this session the group dealt with the question of whether to formulate international sanitary regulations to reduce the risk of spreading

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[1] *World Hlth Org. techn. Rep. Ser.* 1951, **37** ; see page 127.

[2] *World Hlth Org. techn. Rep. Ser.* 1950, **28** ; summarized in *Chron. World Hlth Org.* 1950, **4**, 278

[3] The following took part in this session :

Professor G. Altara, Director-General of Veterinary Services, Office of the High Commissioner for Hygiene and Public Health, Rome, Italy
Professor A. Ascoli, Director, Institute of General Pathology, Faculty of Veterinary Medicine, University of Milan, Italy
Dr. H. Bengtson, Chief Veterinarian, Bureau of Tuberculosis Control, Royal Veterinary Board, Stockholm, Sweden
Dr. B. D. Blood, Chief, Veterinary Public Health Section, Pan American Sanitary Bureau (WHO Regional Office for the Americas), Washington, D.C., USA
Sir Daniel Cabot, Président de l'Office international des Epizooties, Paris, France (*Chairman*)
Dr. V. Carneiro, Chief, Technical Section, Institute of Biology, Sao Paulo, Brazil
Professor T. Dalling, Chief Veterinary Officer, Animal Health Division, Ministry of Agriculture and Fisheries, London, United Kingdom

[*Continued on p. 133*]

zoonoses. The training of public-health veterinarians was discussed ; and recommendations were made regarding the standardization of certain biological products. A list of over 80 zoonoses—together with the causative organism of each and the animals mainly involved—comprises one of the annexes of the group's report.

The following brief account covers only a few of the questions discussed during the session.

Bovine Tuberculosis

Several countries have already successfully controlled bovine tuberculosis and have practically eradicated it from their livestock. Control is based, for the most part, on tuberculin-testing and the segregation or the elimination of infected animals. The tuberculin test is the only method at present applicable on a large scale for detecting infected animals. By removing or separating such animals from the healthy stock, tuberculosis in a herd can be progressively eliminated.

In practice, the population of a herd is entirely renewed every six years. At the end of the six years, the infection will be found to have been considerably reduced if the adult females, which are the most active sources of contagion, are eliminated and care is taken to prevent the young stock from becoming infected. For economic reasons, all animals reacting to tuberculin cannot be slaughtered at the beginning of a control campaign, when the herds show a high degree of infection. Great Britain and the Scandinavian countries have obtained good results without recourse to this drastic measure.

Tuberculin test

All action against bovine tuberculosis is based on the tuberculin test and its interpretation. Types of tuberculin used differ according to country. PPD tuberculin which, it was thought, could be easily standardized by the determination of its nitrogen content, has shown some variation in biological activity independent of now-definable chemical characteristics. Since this product is relatively pure and stable in the dried state, however, it is hoped that an international PPD standard will be developed so that tuberculins

[*Continued from p. 132*]

J. Francis, M.R.C.V.S., Bacteriologist, Biological Laboratories, Imperial Chemical (Pharmaceuticals) Ltd., Wilmslow, Cheshire, United Kingdom
Dr. J. van der Hoeden, Director, State Veterinary Institute, Tel-Aviv, Israel
Dr. R. M. Mendy, Director, Division of Zoonoses, Ministry of Agriculture and Animal Husbandry, Buenos Aires, Argentine
Dr. N. Plum, State Veterinary Serum Laboratory, Copenhagen, Denmark
Dr. J. H. Steele, Chief, Veterinary Public Health Division, Communicable Disease Center (US Public Health Service), Atlanta, Ga., USA (*Rapporteur*)
Professeur J. Verge, Professeur en matière de Maladies microbiennes, Ecole nationale vétérinaire, Alfort (Seine), France (*Vice-Chairman*)
Dr. F. K. Wawoeroentoe, Senior Official, Ministry of Agriculture, Djakarta, Indonesia

Secretariat :

Dr. M. M. Kaplan, Veterinary Officer, Division of Epidemiological Services, WHO (*Joint Secretary*)
Dr. K. V. L. Kesteven, Chief, Animal Industry Branch, Agriculture Division, FAO (*Joint Secretary*)
H. T. B. Hall, B.V.Sc. Veterinary Consultant, Animal Industry Branch, Agriculture Division, FAO

used in various countries can be compared. In addition, standard strains of tubercle bacilli should be made available for the preparation of tuberculin. Theoretically, an avirulent bovine strain would be best.

All the known tuberculins have the disadvantage of causing non-specific reactions. These reactions may be due to the presence of acid-fast bacilli other than the bovine tuberculosis organism causing an allergic condition which results in a positive (non-specific) reaction. Thus, the human tubercle bacillus, relatively non-pathogenic in cattle, transmitted to these animals by tuberculous attendants, may be the source of non-specific positive reactions. On the other hand, some animals, although suffering from advanced, open tuberculosis, do not react to tuberculin.

Although the tuberculin test does not give absolutely specific results, its shortcomings must not be allowed to overshadow its usefulness. Efforts are being made to increase the specificity of the test. One of the advances recently introduced consists of carrying out a comparative intradermal test in which avian and mammalian tuberculins are injected in two sites on the neck of the animal at the same time.

Role of vaccination

Vaccination of livestock, particularly with BCG, may be considered a temporary expedient, applicable under certain conditions of economic hardship when it is necessary to reduce the spread of the disease before eliminating the infected animals. Vaccination has its disadvantages : it may create an allergy non-distinguishable from natural infection ; intravenous injection of BCG—which sometimes replaces subcutaneous injection—may produce local or general reactions. Vaccination must therefore be used with caution. Tuberculosis-free calves should be vaccinated as soon after birth as possible and then protected against exposure to infection for several weeks. Vaccinated animals should be introduced into the herd to replace gradually those which react to tuberculin, which are then eliminated. The former, in their turn, will be progressively replaced by non-vaccinated, tuberculosis-free animals. In this way, vaccination can be a useful additional weapon in controlling bovine tuberculosis.

In addition to BCG, the murine tubercle bacillus (vole bacillus) has been used as a vaccine. Experiments have shown that this organism gives animals a higher resistance than that brought about by BCG, but the virulence of the strains used is still too variable for general use of this vaccine to be advisable. Further study of this method is desirable.

International Sanitary Measures Against Zoonoses

Is it possible to establish sanitary regulations to prevent the spread of the zoonoses, similar to the regulations dealing with contagious diseases

in man ? The group discussed this question, and it became evident that it would be difficult to frame regulations acceptable to all countries ; for, while certain countries might be ready to impose the most stringent regulations, others would be unable to do so for economic reasons or because they are obliged to import livestock. Nevertheless, the problem is worthy of further consideration. It should be determined which of the zoonoses are the most important from the international viewpoint and what measures might be enacted. WHO, FAO, and the Office international des Epizooties will submit a report relative to this at the next session of the group. The following ten diseases seemed sufficiently important to warrant a study of sanitary measures to combat them : equine virus encephalitides, rabies, psittacosis, Q fever, leptospirosis, tularaemia, leishmaniasis, bilharziasis, trichinosis, and hydatidosis.

INTERNATIONAL DOCUMENTATION ON HEALTH LEGISLATION

> *" Clearly we have to hope that, in proportion as exact knowledge is gained of agencies prejudicial to the public health, the nation will provide against them by appropriate law and by effective administration."* J. SIMON [1]

According to the terms of Article 10 of the annex to the 1907 Rome Agreement, the Office International d'Hygiène Publique (OIHP) was required to publish laws and regulations, national or local, concerning communicable diseases, issued in various countries. Thus, from 1909 to 1946, health legislation—some of which was not, however, directly concerned with communicable diseases—was published in French in a special section of the *Bulletin mensuel de l'Office International d'Hygiène publique*. This function of OIHP was of prime importance : if the dissemination of information concerning new prophylactic and therapeutic methods is to be considered an expression of international collaboration in health matters, it is likewise important to make known the legislative measures which permit their application.

At its second session, the WHO Interim Commission decided that health legislation should be published by WHO in the form of a separate periodical —the *International Digest of Health Legislation*—appearing in French and in English, instead of merely constituting a section of the *Bulletin of the*

[1] Simon, J. (1897) *English sanitary institutions*, London, p. 465

World Health Organization. It was felt that, by its very nature, health legislation would appeal primarily to a specialized group of readers. The *Digest* is of interest particularly to national health-administrations, since valuable information regarding legislative measures for enabling countries all over the world to solve public-health problems can be found therein. Professors of hygiene, public-health experts, and other specialists can also find in the *Digest* important technical information concerning, for example, the standards with which certain food products must comply in different countries, and the conditions for approval of hospital equipment and construction, and of swimming-baths, slaughter-houses, etc.

At its sixth session, the WHO Executive Board approved the " criteria proposed by the Director-General for the selection of legislative texts for publication in the *International Digest of Health Legislation* ".[2] Legislation of a strictly local administrative nature—such as the establishment and composition of committees, penal provisions, granting of subsidies for health work, and remuneration of officials—are not of interest to other countries and are therefore not to be published. On the other hand, laws which come within one of the following categories are of international interest :

(*a*) laws which, by their general and basic nature, may serve as " models " —for example, the act concerning the exercise of the medical profession (Austria) [3] and the regulations concerning food and drugs (Ceylon),[4] already published in the *Digest* ;

(*b*) laws and regulations giving effect to certain health measures which are not yet compulsory in a number of countries—for example, the three laws, all differing in scope and character, concerning BCG vaccination in Austria, France, and Yugoslavia ; [5]

(*c*) laws and regulations relating to the use and dangers of new substances (antibiotics, radioactive substances, etc.) ;

(*d*) health legislation affecting the international circulation of persons and goods, including quarantine measures and the standards and conditions with which therapeutic substances, foodstuffs, and other products must comply in order to be placed on the market in certain countries.

The legislation which is at WHO's disposal for publication comes chiefly from Member States, as was provided for in Article 63 of the Constitution. Unfortunately, and in spite of repeated requests, certain countries do not send copies of their legislation to WHO, or else do so only very irregularly.

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[2] Resolution EB6.R19, *Off. Rec. World Hlth Org.* 29, 9
[3] *Int. Dig. Hlth Leg.* 1951, 2, 344
[4] *Int. Dig. Hlth Leg.* 1951, 2, 372
[5] *Int. Dig. Hlth Leg.* 1950, 2, 166, 243, 329

The material sent by the various countries consists principally of official gazettes, bulletins issued by public-health services, texts selected by national administrations, and health journals with a section on legislation. These texts constitute a considerable amount of information, in many different languages. This material is carefully examined, and all the enactments relating to health are indexed and classified. The laws which are selected are then published in the *Digest* where, according to their importance, they are reproduced in full or in extract form, are summarized, or are simply noted by their titles. The *Digest* appears quarterly, in two editions —French and English. However, certain difficulties impeded regular publication of the *Digest* before the end of 1949.

Volume 1, which was completed in 1950, contains 241 texts, of which 112 were published either in full or in extract form. The index published in No. 4 of this volume shows that a considerable number of different subjects have been covered. For example, under the heading of " Tuberculosis " 13 different subjects are treated in texts from 8 countries.

Certain improvements have been introduced in the *Digest*, starting with Volume 2, No. 1, notably with regard to the arrangement of texts. All the legislation of one country is now placed together ; previously, those which were summarized or mentioned by title appeared only in a separate section entitled " List of Selected Health Legislation ". In addition, starting with Volume 2, each number includes a bibliographical section in which are given summaries of the contents of publications on health legislation received by the WHO Library. An index to Volume 2 will be published, as in Volume 1, with No. 4. It is anticipated that a cumulative index will be published at the end of five years, which will facilitate reference. Delays in publication of certain legislation will gradually be reduced.

It should be noted that labour legislation is published in the *Legislative Series* of the International Labour Office. Legislation concerning the control of drugs liable to produce addiction is published by the Commission on Narcotic Drugs of the United Nations Economic and Social Council in two series of fascicles entitled *Laws and Regulations, communicated in compliance with the terms of the Convention of 13 July 1931 for limiting the manufacture and regulating the distribution of narcotic drugs, as amended by the Protocol of 11 December 1946*, and *Annual Reports of Governments under the Convention of 13 July 1931 for limiting the manufacture and regulating the distribution of narcotic drugs, as amended by the Protocol of 11 December 1946*. Finally, legislation concerning the welfare of children is published by the Department of Social Affairs of the United Nations in the *Legislative and Administrative Series, Child and Youth Welfare*, the first volume of which deals with legislation of 1949 ; a summary of legislation passed in previous years on this subject appeared in the *Annual report on child and youth welfare* of the United Nations.

STATISTICAL CENTRE ESTABLISHED

Arrangements have now been concluded for the establishment of a WHO centre for problems arising in the application of the *International Statistical Classification of Diseases, Injuries, and Causes of Death.* The establishment of such a centre was recommended by the Expert Committee on Health Statistics [1] and was approved by the Third World Health Assembly.[2] It will be located at the General Register Office, London, and will be directed by Dr. P. Stocks, who has retired from the post of Chief Medical Statistician to undertake this work.

The principal activities of the centre may, for the present, be grouped under six headings :

1. Study of coding difficulties experienced by national offices, such difficulties arising from :

(*a*) errors and faults in the *Classification* itself ;

(*b*) lack of precision in the rules for selecting the underlying cause of death ;

(*c*) variations in the form and use of the medical certificate of cause of death ;

(*d*) absence of rules for dealing with multiple conditions in morbidity.

2. Discussion with national offices using the *Classification* in order to resolve as quickly as possible the difficulties listed above, by giving decisions on minor points and reaching agreement on tentative solutions of more important matters, these solutions being subject to subsequent confirmation by the Expert Committee on Health Statistics or by a subcommittee.

3. Study of comparability of the new *Classification* with the 5th Revision, as shown by statistics of deaths coded by both lists without change of certificate or rules of selection, with a view to producing a report to help countries in their difficulties in linking the new statistics to those of past years.

4. Study of the use being made, in one or more countries, of the International Certificate of Cause of Death, with special reference to entry of multiple causes, interval between reputed onset of disease and death, etc., in hospital, rural, and urban practice, so that a report can be drawn up for sending to other countries and for submission to the Expert Committee on Health Statistics.

5. Study of the various condensed lists coming into use for all kinds of purposes, particularly hospital statistics, and of the experience gained

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[1] *Chron. World Hlth Org.* 1949, 3, 247

[2] *Chron. World Hlth Org.* 1950, 4, 237

with them, so as to advise on the most useful condensations and to try to avoid too much diversity in such supplementary lists.

6. Study of the elaborations by special subdivisions of categories in the detailed list which are being made for national purposes and by specialist organizations, with a view to avoiding unnecessary diversity and collecting experience on the use of such elaborations.

7. Study of progress of research projects involving the use of the *Classification* which have been recommended by the Expert Committee on Health Statistics and by its subcommittees.

Correspondence to Dr. Stocks should be addressed to : WHO Centre for Problems Arising in the International Classification of Disease, General Register Office, Somerset House, London W.C.2, England.

Notes and News

Dr. M. G. Candau Becomes Assistant Director-General

Dr. M. G. Candau, Director of the WHO Division of Organization of Public Health Services, has been named Assistant Director-General in charge of the Department of Advisory Services. He succeeds Dr. Martha M. Eliot,[1] who is retiring.

Dr. Candau was born in Rio de Janeiro, Brazil, in 1911. He received his medical education at the School of Medicine of the State of Rio de Janeiro, and his public-health training at the University of Brazil and the School of Hygiene and Public Health of Johns Hopkins University, Baltimore, Md., USA.

Dr. Candau has held numerous public-health posts in his native country : Chief of various rural health centres ; Assistant and Acting Chief of the Service of Studies and Research of the Division of Maternity

FIG. 4. DR. M. G. CANDAU

[1] *Chron. World Hlth Org.* 1949, 3, 114

and Child Welfare of the National Health Department ; Technical Assistant to the Director-General of the Department of Health of the State of Rio de Janeiro ; Health Officer of the Northeast Malaria Service ; Chief of the City Health Centre in Niterói, State of Rio de Janeiro ; Assistant Chief, Medical Department of the Service for Mobilization of Workers for the Amazon ; and, most recently, posts with the Serviço Especial de Saúde Pública—Director, Division of Health Education (1943-4), Assistant to the Superintendent (1944-7), and Superintendent (1947). (The Serviço Especial de Saúde Pública is a co-operative public-health organization of the Brazilian Government and the Institute of Inter-American Affairs which serves about 45% of the total population of Brazil and employs nearly 2,000 doctors, engineers, nurses, and other health personnel.)

In addition, Dr. Candau has done considerable work in education, being Assistant Professor of Hygiene of the School of Medicine of the State of Rio de Janeiro, since 1938, and Assistant Professor of Epidemiology at the Course of Public Health of the Ministry of Education and Health of Brazil. He has published a number of papers on public-health subjects and has been active in public-health organizations, among them the Brazilian Society of Hygiene, of which he was Executive Secretary 1946-7 and President 1948-9, the Royal Society of Tropical Medicine and Hygiene, London, the Inter-American Association of Sanitary Engineering, and the American Public Health Association, of which he was Vice-President in 1949-50. He joined the staff of the World Health Organization in May 1950.

First Class Graduates from Copenhagen Anaesthesiology Centre

Thirty medical Fellows, from seven European nations, have completed the first one-year course given at the Anaesthesiology Training Centre, Copenhagen. The Centre, a co-operative enterprise of the Faculty of Medicine of the University of Copenhagen and WHO, was established in May 1950.[2] WHO provides for the maintenance and travel of the foreign Fellows at the Centre and book allowances for the Danish students. It has also supplied anaesthesia equipment for use in the training courses, which are actually given at the four principal hospitals in Copenhagen.

A representative of the Director-General of the World Health Organization attended the ceremonies which marked the graduation of the class and expressed appreciation of the Centre's accomplishments : " As our trainees go back home, their services will become foci for the training of more anaesthesiologists ; and this process will go on until, in a few years' time, anaesthesiology will have found its new and proper place in all European countries."

A second group of thirty Fellows—from Denmark, Finland, France, Greece, Norway, Sweden, Switzerland, and Yugoslavia—began their training on 3 May. Dr. R. Woolmer, of the University of Bristol, England, will be the new Senior Instructor for this second course.

Successful Filariasis Survey Completed

A three-man expedition sent by WHO to the Maldive Islands to survey the filariasis situation there has successfully completed its mission, despite considerable odds. Dr. M. O. T. Iyengar, of Calcutta, and Messrs M. I. Mathew and M. A. U. Menon, both of Travancore, lived and worked on a small schooner, which took them to 33 islands in the three southern atolls of the Maldive Archipelago, a British Protectorate situated on the Equator 400 miles west of Ceylon. They examined 4,000 persons in their survey and found that one in every three suffered from filariasis in one stage or another. In a small laboratory aboard the schooner, they identified the various species of mosquitos respon-

[2] *Chron. World Hlth Org.* 1950, 4, 339

sible for transmitting either filariasis or malaria and made microscopic examinations of blood samples from 3,828 of the islanders. Ashore they investigated the breeding-places of the incriminated mosquitos and recommended simple and inexpensive control methods to the authorities.

The team members narrowly escaped death when, in an attempt to reach Ceylon in their schooner, they were caught in a cyclone which lasted 42 hours. After 15 days at sea, the craft managed to return to Male, the Maldive capital, from where the scientists were picked up by a steamer which went out of its course to rescue them and take them to Karachi.

Consultant in Health Education Joins WHO/UNESCO Team

Dr. C. E. Turner, WHO consultant in health education, worked during the month of May with the WHO/UNESCO fundamental education team operating in the Sindibis area, near Cairo, Egypt. This team, which has been at Sindibis since December 1950 and which will remain in Egypt until June 1951, is aiding the Egyptian Government in efforts to improve techniques in agriculture, health, and fundamental education. Dr. Turner will concentrate on health education of the public.

Before going to Egypt, Dr. Turner visited Iraq, where he assisted the Government in the public-health aspects of a project in which 1,000 families were being settled on the land. He also consulted with Iraqi military authorities on means of improving the teaching of hygiene to army recruits.

Dr. Turner, who holds the degrees of M.A. from Harvard University, M.Ed. from Boston University, and Doctor in Public Health from the Massachusetts Institute of Technology, Cambridge, Mass., USA, was formerly Professor of Public Health, Emeritus, at the Massachusetts Institute of Technology ; and is now Assistant to the President of the National Foundation for Infantile Paralysis ; President of the Society of Public Health Educators ; and the author of several books on health education.

Maternal and Child Health Project in Burma

A WHO maternal and child health venereal disease team will, with UNICEF financial assistance, aid the Government of Burma in a two-year project to improve health services, particularly those relative to maternal and child health care. The team will consist of a paediatrician, a specialist in venereal diseases, a serologist, five nursing instructors, and four public-health nurses. The Government of Burma will provide counterparts for the international staff, as well as auxiliary personnel, materials and services which are available locally, and office and living accommodation for the international team.

Dr. J. E. B. McPhail, of Canada, has assumed the post of paediatrician. Before accepting this WHO appointment, Dr. McPhail served as adviser in child health to the UNICEF China Mission. One of the nursing instructors recruited for the project, Miss R. Ingram, of the USA, has already been working in the Rangoon General Hospital for several months.

The project, in addition to generally strengthening the health services of Burma, will aim to establish a paediatric department in the Rangoon General Hospital, to improve hospital and laboratory facilities, to diagnose and treat syphilis in mothers and children, to expand school health services, and to improve and extend teaching facilities for health personnel.

Views on WHO

World Health

A recent editorial in *Medicine Illustrated* (1951, **5**, 51) is devoted to the accomplishments of WHO :

" In times when men are somewhat disillusioned and certainly disappointed with the results achieved by the United Nations in the wider political sphere, it behoves us to pause and be thankful for the considerable achievements and contributions to world progress that the medical profession at least has been able to make in the international field. Their work on behalf of the United Nations has already produced some tangible and lasting results in which pride may justly be taken.

" It was at the San Francisco Conference in 1945 that the decision was made for the United Nations to create a specialized agency in order to deal with problems of world health. The constitution of the WORLD HEALTH ORGANIZATION was drafted in 1946, and this body was finally established officially in 1948. From its inception problems relating to *malaria*, *tuberculosis*, *venereal diseases* and *malnutrition* have received the highest priority and already *WHO* can point to the successful organization of vast projects on a scale undreamt of only a few years ago—and after less than three years of official existence !

" Much of the early work has been, of necessity, exploratory in nature, for before a solution to a problem can be attempted, it is at first essential to know its extent. The collection of proper statistics from geographical rather than political areas, often where none previously have existed, is a time-consuming, undramatic but basic feature of any campaign. The definition of base lines on which to commence has been the task of various Expert Committees and their findings have been published in the ever growing number of technical reports which have appeared during 1950. These cover a wide range of subjects from the Unification of Pharmacopoeias, the Biological Standardization of Drugs and the consideration of sanitation and insecticides, to matters concerned with actual diseases as *plague*, *cholera*, *bilharzia*, *malaria*, and the *venereal diseases*.

" Committees of assessment have been followed by the appointment of travelling advisers and by the initiation of field surveys. The not inconsiderable number of specialist advisers from all over the world who have been widely circulated by *WHO* cannot but have had an enormous influence in accelerating the introduction of modern methods in medically backward countries—a process of levelling-up. A number of areas have been selected for the demonstration of mass therapy and prophylaxis ; guided at first by imported advisers so that they may teach local personnel to carry on for themselves.

" Some of the most spectacular projects already in operation are those concerned with the treponematoses. At the time of writing, a vast mass treatment campaign, using procaine penicillin, is attempting to eradicate *yaws* from the island of Haiti. Another scheme of a like nature proceeds apace in Indonesia. The present year sees the commencement of yet another planned operation which may ultimately lead to the extinction of *bejel*. This disease ravages the Bedhouin Arabs of both Iraq and Syria ; it has been estimated that in Iraq alone a million persons may have or have had it. The *WHO* project is partly exploratory in the hope that, by means of a detailed study with the aid of adequate methods of diagnosis, the findings may be applicable to kindred treponematoses all over the world. The survey will be followed by mass treatment. It is most fitting that the Director of this bejel/syphilis project should be Dr. Ellis H. Hudson of Ohio, U.S.A.—for it was he, as a mission doctor in Syria over a quarter of a century ago, who first described the bejel. ...

" Of the continents, Asia and Africa are the two most in need of help. Asia, or that part of it still accessible to the United Nations, is already being assisted to a considerable degree, and increasing attention is now being paid to Africa. . . .

" Disease is not confined within political boundaries and only the strongest geographical frontiers, as the sea or a high range of mountains, limit their spread. . . . *WHO* is obtaining a global viewpoint of disease, and its efforts deserve our fullest support : if nothing else of the United Nations survived other than *WHO* it would still represent a proud monument of our Age ! "

WORLD HEALTH ORGANIZATION MONOGRAPH SERIES

PSYCHIATRIC ASPECTS OF JUVENILE DELINQUENCY

Lucien BOVET

No. 1, 1951, 90 pages, price 5/- $1.00 Sw. fr. 4.–

A review of the established facts on the causes, prevention, and treatment of juvenile delinquency is combined with the impressions gathered by Dr. Bovet during a tour of America and Europe, where he consulted over 150 specialists and visited many institutes.

Separate editions in English and in French

MATERNAL CARE AND MENTAL HEALTH

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A survey (based on statistical data) of the malaria-control campaigns in progress in Africa, America, Asia, and Europe, giving a picture of the widespread and sensational regression of morbidity and mortality from malaria following the use of residual insecticides.

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Results of New Zealand's Use of School Dental Nurses

John T. FULTON

No. 4, 1951, 87 pages, price 5/- $1.00 Sw. fr. 4.–

The results of the use in New Zealand of dental nurses to operate school dental clinics are clearly brought out in this report, which also includes statistics from the author's investigation of the dental condition of over 4,000 New Zealand schoolchildren.

English edition only

MANUAL OF FRAMBOESIA

Kenneth R. HILL
R. KODIJAT
M. SARDADI

No. 5, 1951, in preparation

This manual gives a clinical description of the skin manifestations of framboesia, amply illustrated by photographs. The authors divide the conditions into sixteen main groups and compare their nomenclature with the terminology used by previous writers.